IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant : David M. Baggett et al.   Art Unit   : 2772
Serial No. : 09/431,674   Examiner : Porter, Rachel L.
Filed   : November 1, 1999   Conf. No. : 9072
Title   : AVAILABILITY PROCESSING IN A TRAVEL PLANNING SYSTEM

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION OF THE
DECISION ON APPEAL DATED MARCH 10, 2008

Sirs:

Appellants respectfully request reconsideration of the Board of Patent Appeals and Interferences Decision on Appeal dated September 18, 2008, under 37 CFR 41.50(b) (2). Specifically, Appellants request reconsideration of the Board's decision upholding the rejection of claims 11-13 as being indefinite under 35 U.S.C. §112, second paragraph.

Appellants believe that the Board misapprehended or overlooked the following points in rendering their decision.

I.   The Board overlooked teachings from Appellants' specification

Appellants believe that the Board overlooked several passages from Appellants' Specification that provide the standard required by the Board and to which "low quality" and "high quality" are ascertained.[1] The Board having overlooked these teachings from the Specification caused the Board to render its decision without giving full consideration to the standard articulated by Appellants.

The Board found[2]: **"The Appellants' Specification describes various sources for availability data, but does not specify which sources contain high quality data and which source contain low quality data:."[3]**

---

[1] Decision page 8
[2] Excerpts from the Board's decision are set out in **"Bold small type face."**
[3] Decision page 5

Appellants disagree. The Board overlooked that the Specification also teaches:

> The process 70a is a sequential multi-stage query process. The process 70a first uses a cache or other predictive type source 65 to provide an initial set of queries and then performs a live query to airline yield management or availability systems 66. The cache queries are quick and cheap to perform, but can have stale or incorrect data. The live queries are expensive. Therefore, only a few can be made per travel planning session. However the live queries are up-to-date and correct.[4]

In this paragraph, Appellants provide the requisite standard required by the Board. Specifically, Appellants taught that high quality data results from "a live query made to an airline's yield management system" because the answer that are returned are known to be up-to-date and correct. Overlooking this teaching, caused the Board to incorrectly sustain the examiner.

Moreover, Appellants also taught that predictive sources such as a predictive cache or other predicted sources are quicker and cheaper than the live query made to an airline's yield management system, but can contain stale or incorrect data. Thus, the standard of "high" quality vs. "low" quality data is present in Appellants' Specification measured against the quality level of data received from an airline's yield management system 66.

Appellants also taught that:

> The different sources 65, 66 each have different properties, including the cost (in time, computation, communication, or money) of performing a query and the quality (age/freshness, confidence, precision, or validity). Sometimes all costs are negligible, such as when querying a cache; other times the costs are substantial, such as when submitting live queries directly to the airlines (costly in time, communication, and money since the

---

[4] Specification page 10, lines 4-11.

airlines often charge a transaction fee). When a source is
expensive, it is desirable to contain these costs.[5]

Appellants taught that high quality data originating from live queries made to an airline's
yield management system is expensive in terms of time, computation and monetary costs,
whereas predictive sources such as a predictive cache have time, computation and monetary cost
that are negligible compared to the live queries.

The Board further found that: "Although the Appellants' Specification describes sources for the
availability data, it does not teach which of the enumerated sources contain "low-quality" data versus "high-quality"
data (Fact 2)." Again, the Board also overlooked factors described in Appellant's specification[6]
that one skilled in this art would understand that among the predictive sources, implementation
specifics and indeed the state of these other sources at any moment in time, would govern the
quality levels of the various sources.

All of the predictive sources have lower quality data than the airline's yield management
system. While even among the various predictive sources the data quality would vary, the
predictive sources would not have a data quality level that was higher than the data quality level
of the airline yield management system, at least because these predictive sources attempt to
predict the data that the airline yield management system would return.

The Board also found that: "The Specification, in some instances, associates low-quality data with
relatively less expensive sources than high-quality data, but it fails to make clear a standard by which to evaluate what is
low cost and what is high cost (Fact 3). What is high cost to one person having ordinary skill in the art may be considered
to be low cost to another." However, the Board overlooked Appellants' teachings that for the high
quality data, namely queries to an airline's revenue management system, there is a fixed
monetary cost associated with that query, which would be considered high cost by a person
skilled in this art. On the other hand, monetary costs associated with predictive sources are
negligible or indeed nonexistent.

While, the Board correctly observes that: "The Specification further describes the properties by
which to evaluate the quality of data (Fact 4).," The Board incorrectly concluded that: "but, it does not provide

---

[5] Specification page 8, lines 23-32.
[6] See for instance, page 10;

a standard that incorporates these properties to measure the quality of data." The Board overlooks that the results from an airline yield management system are the standard by which the quality of results from predictive sources is measured. The Board's gives the following example:

> **For instance, the Appellants' Specification fails to provide a standard by which one of ordinary skill in the art would determine whether data from an availability predictor based upon a cache or database of stored availability queries 65a is high quality data or low quality data. This data from source 65a may be of higher quality than data from source 65b, but of lower quality than data from source 66. As such, one having ordinary skill in the art, reading the Specification, would not understand what is encompassed by low-quality data and high-quality data when claim 11 is read in light of the Specification.**

However, when this example is viewed through the context of the overlooked teachings from the Specification, it is clear that all of the predictive type sources 65 have lower quality data than the airline's availability system 66. Which of the predictive sources 65 has lowest or highest quality data would depend upon specific differences in implementation of the different sources.

The Specification describes that data from a source would have different quality levels. Indeed, while a predictive cache may be considered as relatively higher quality than some of other predictors, some entries in a predictive cache could be "low quality data," depending on the age of that data and how the close characteristics of a query used to produce that data differed from characteristics of a query made to the predictive cache for that data. [7] On the other hand, a relatively poor implementation of a predictive cache could provide low quality data and thus be considered a low quality source compared to a very good implementation of a model-based predictor.

It is the purpose of the claims to particularly point out and to distinctly claim the subject matter which Appellants regard as their invention. See *In re Geoffe*, 526 F.2d 1393, 1397, 188

---

[7] See for instance page 10, line 12:

> As shown in FIG. 3A, after the cache queries are completed, the process 76 sorts the list of legs based on the freshness of the information returned by the cache, most stale first. The process 70a queries the live data source on each of those legs in order (most stale first). Within a predetermined timeout period, the system stops the query process before all queries have been made to the live source. Because the list of legs was prioritized to put the lowest quality data first, the process 76 received fresh data about those legs first, and the minimum quality of information the system has about any leg was raised.

U.S.P.Q. 131, (CCPA, 1975). Claim 11 requires "speculatively determines the travel options using availability data that is determined to be low-quality data as though the data were high-quality data." The idea of speculative execution is well documented in the Specification.[8]

In order for the skilled person to comprehend claim 11, it is not necessary for that person to know exactly which source has the higher and which has the lower quality data for an understanding of the metes and bounds of claim 11. What is necessary is that the skilled understand that some seat availability sources produce high quality data, while other sources produce lower quality data measured against the standard of an airline yield management system.

However, if the skilled person was uncertain of what low quality and high quality in claim 11 meant, such person would consult Appellants' specification and find the following:

> The ordering process ordering of operations for an "After Faring" strategy is shown. The process determines legs of using a scheduler and determines fares using a faring process. The process makes use of the low-quality low-cost source of availability information, assume every seat is available in every booking class. Computation proceeds as if the low-quality speculatively guessed data were high quality, in the sense that the origin of the data does not affect the computational processes. This process uses speculative computation 105 to determine results. Instead of spending the cost to acquire and process actual answers, the system speculates 105 as to what the answers might be and expends computation to ascertain what the results would be were the speculation true. Speculative computation has already been seen in the context of Monte-Carlo integration to compute the expected price discussed above.[9]

That skilled person after reading this excerpt as well as the remaining portions of the Specification would now clearly appreciate that claim 11 was directed to a technique for determining travel options that used availability information from a "low quality source" and proceeded to calculate travel options as if the data were from a "high quality source," e.g., the

---

[8] See pages 17-19 for instance.
[9] Id. Page 17, line 2.

airline yield system or a high quality predictive source, using any of the described strategies, e.g., "After Faring", "Incremental Faring Computations" "Multiple Iterative Scheduling and Faring."

II.   Conclusion

Accordingly, Appellants believes that the Board overlooked passages from Appellants' Specification causing the Board to misapprehend Appellants' arguments and claims, and therefore err in sustaining the examiner's rejection of claims 11-13 as being indefinite.

Therefore, Appellants contends that the rejection of claim 11, and its dependent claims 12 and 13, as indefinite should be reversed.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: November 7, 2008   /Denis G. Maloney/
                                          Denis G. Maloney
                                          Reg. No. 29,670

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

22065335.doc